



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2019-0670; Product Identifier 2019-NM-104-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 737-200, -200C, -300, -400, and -500 series airplanes. This proposed AD was prompted by an evaluation by the design approval holder (DAH) indicating that the lower skin of the fuselage skin lap splices along the lower fastener row of a certain stringer lap splice on certain body station skin panels is subject to widespread fatigue damage (WFD). This proposed AD would require inspections of the lower skin of the fuselage skin lap splices along the lower fastener row of a lap splice on certain body station skin panels and applicable on-condition actions. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0670.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0670; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: James Guo, Aerospace Engineer,
Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard,
Lakewood, CA 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email:
james.guo@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2019-0670; Product Identifier 2019-NM-104-AD” at the beginning of your comments. The FAA specifically invites comments on the overall regulatory, economic, environmental, and energy aspects of this NPRM. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

The FAA will post all comments received, without change, to <http://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this proposed AD.

Discussion

Fatigue damage can occur locally, in small areas or structural design details, or globally, in widespread areas. Multiple-site damage is widespread damage that occurs in a large structural element such as a single rivet line of a lap splice joining two large skin panels. Widespread damage can also occur in multiple elements such as adjacent frames or stringers. Multiple-site damage and multiple-element damage cracks are typically too

small initially to be reliably detected with normal inspection methods. Without intervention, these cracks will grow, and eventually compromise the structural integrity of the airplane. This condition is known as WFD. It is associated with general degradation of large areas of structure with similar structural details and stress levels. As an airplane ages, WFD will likely occur, and will certainly occur if the airplane is operated long enough without any intervention.

The FAA's WFD final rule (75 FR 69746, November 15, 2010) became effective on January 14, 2011. The WFD rule requires certain actions to prevent structural failure due to WFD throughout the operational life of certain existing transport category airplanes and all of these airplanes that will be certificated in the future. For existing and future airplanes subject to the WFD rule, the rule requires that DAHs establish a limit of validity (LOV) of the engineering data that support the structural maintenance program. Operators affected by the WFD rule may not fly an airplane beyond its LOV, unless an extended LOV is approved.

The WFD rule (75 FR 69746, November 15, 2010) does not require identifying and developing maintenance actions if the DAHs can show that such actions are not necessary to prevent WFD before the airplane reaches the LOV. Many LOVs, however, do depend on accomplishment of future maintenance actions. As stated in the WFD rule, any maintenance actions necessary to reach the LOV will be mandated by airworthiness directives through separate rulemaking actions.

In the context of WFD, this action is necessary to enable DAHs to propose LOVs that allow operators the longest operational lives for their airplanes, and still ensure that WFD will not occur. This approach allows for an implementation strategy that provides

flexibility to DAHs in determining the timing of service information development (with FAA approval), while providing operators with certainty regarding the LOV applicable to their airplanes.

The FAA has received a report indicating that an operator of a Model 737-300 airplane discovered a crack in the skin at a chem-milled step at body station (STA) 727B+10, just above stringer (S)-14R. The airplane had accumulated 88,805 flight hours and 65,804 flight cycles at the time the crack was found. Upon further inspection in the local area using high frequency eddy current (HFEC) hole probe inspection, multiple fastener hole cracks were found in the S-14 lap splice lower row in the lower skin between STA 727A and STA 727E. The lower skin at S-14 is structure that may be susceptible to WFD and may also have scratches that can propagate into cracks. The scratch cracks may interact with fatigue cracking. This condition, if not addressed, could result in rapid decompression or loss of structural integrity of the airplane.

Related Service Information under 1 CFR part 51

The FAA reviewed Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019. The service information describes procedures for detailed inspections for previous repairs, and repetitive dual frequency eddy current (DFEC) inspections for cracks of the lower skin of the fuselage skin lap splices along the lower fastener row of the S-14 lap splice at specified locations on the STA 727 to STA 908 skin panel in areas not inspected by other service bulletins, and applicable on-condition actions. On-condition actions include open hole HFEC inspections for cracks, and repair.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination

The FAA is proposing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

This proposed AD would require accomplishment of the actions identified in Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019, described previously, except for any differences identified as exceptions in the regulatory text of this proposed AD.

For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2019-0670.

Costs of Compliance

The FAA estimates that this proposed AD affects 158 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
DFEC Inspections of S-14 Lap Splices	18 work-hours X \$85 per hour = \$1,530 per inspection	\$0	\$1,530 per inspection	\$241,740 per inspection

The FAA estimates the following costs to do any necessary on-condition inspections that would be required. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
97 work-hours X \$85 per hour = \$8,245	\$0	\$8,245

The FAA has received no definitive data that would enable us to provide cost estimates for the on-condition repairs specified in this proposed AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

This proposed AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the

Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes and associated appliances to the Director of the System Oversight Division.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866,
2. Will not affect intrastate aviation in Alaska, and
3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

The Boeing Company: Docket No. FAA-2019-0670; Product Identifier 2019-NM-104-AD.

(a) Comments Due Date

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE Federal Register].

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 737-200, -200C, -300, -400, and -500 series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by an evaluation by the design approval holder (DAH) indicating that the lower skin of the fuselage skin lap splices along the lower fastener row of the stringer (S)-14 lap splice on certain body station skin panels is subject to widespread fatigue damage (WFD). The FAA is issuing this AD to address scratch cracks and fatigue cracking which may interact and could result in rapid decompression or loss of structural integrity of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 737-53A1382, dated May 6, 2019, which is referred to in Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019.

(h) Exceptions to Service Information Specifications

(1) For purposes of determining compliance with the requirements of this AD: Where Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019 uses the phrase “the original issue date of Requirements Bulletin 737-53A1382 RB,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019, specifies contacting Boeing for repair instructions or for alternative inspections: This AD requires doing the repair, or doing the alternative inspections and applicable on-condition actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Terminating Action

Certain skin panel replacements identified as terminating action in Boeing Alert Requirements Bulletin 737-53A1382 RB, dated May 6, 2019, terminate the inspections in the corresponding locations required by this AD.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(k) Related Information

(1) For more information about this AD, contact James Guo, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email: james.guo@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; phone: 562-797-1717; Internet: <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Standards Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued in Des Moines, Washington, on August 23, 2019.

Suzanne Masterson,
Acting Director,
System Oversight Division,
Aircraft Certification Service.

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